UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604

SUBJECT:	CLEAN AIR ACT INSPECTION REPORT Vision Pickling and Processing, Waterman, Illinois
FROM:	Daniel Schaufelberger, Environmental Scientist AECAB (MI/WI)
THRU:	Sarah Marshall, Section Supervisor AECAB (MI/WI)
TO:	File

BASIC INFORMATION

Facility Name: Vision Pickling and Processing

Facility Location: 9341 State Route 23, Waterman, IL 60556

Date of Inspection: 01/10/2023

EPA Inspector(s):
1. Daniel Schaufelberger, Environmental Scientist
2. Jacob Herbers, Environmental Engineer

Other Attendees:
1. Darren DeLeon, General Manager (Vision Pickling & Processing)

Contact Email Address: ddeleon@visionpickling.com

Purpose of Inspection: Determine compliance with the Clean Air Act.

Facility Type: Batch steel pickling

Regulations Central to Inspection: Illinois State Implementation Plan

Arrival Time: 11:45 AM Central
Departure Time: 1:30 PM Central

Inspection Type:

☒ Unannounced Inspection
☐ Announced Inspection

OPENING CONFERENCE

☒ Presented Credentials
☒ Stated authority and purpose of inspection
☒ Provided Small Business Resource Information Sheet
☐ Small Business Resource Information Sheet not provided. Reason:
☒ Provided CBI warning to facility

The following information was obtained verbally from Darren DeLeon unless otherwise noted.

Process Description:
The Vision Pickling & Processing (Vision), Waterman, Illinois facility removes surface scale and iron oxides from steel components in a process known as pickling. The process begins when Vision loads the steel parts onto racks where they are secured for the pickling process. The typical weight of a batch is approximately 20,000 pounds.

The racks of steel are conveyed to a series of tanks containing alkaline, water, and hydrochloric acid (HCl). The steel is first submerged into Tank 1 or 2 which contains a mild alkaline solution for removing oil, grease, and dirt from the surface of the steel. This solution is maintained at an elevated temperature of approximately 175 F to facilitate the removal of the surface contaminants. After being kept in these tanks for at least 45 minutes, the steel is removed and rinsed in water Tank 3. After the steel is rinsed, it is moved to Tank 4 or 5 which contains 18% HCl. The HCl is maintained at ambient temperatures. The steel remains submerged in the HCl typically between 20 and 90 minutes, depending on the type and condition of the steel. The steel is then removed from the HCl tanks and rinsed in water to remove residual acid from the steel. Once rinsed the steel is moved to Tank 7, another heated alkaline solution tank, to complete the neutralizing of the steel surface. The steel is lastly rinsed in water (Tank 8), to remove the residual alkaline solution. The freshly pickled steel is then submerged in either oil (Tank 9) or synthetic rust protection (SRP) (Tank 10) and allowed to drip dry over one of three dry pits. Once dry, the steel is unloaded from the racks and rebundled in preparation for shipping.

Staff Interview: The Vision facility has 36 full time employees and began operating in 1996. Each acid tank has a volume of 16,000 gallons. On average the facility receives two tanker trucks (about 3,900 gallons) of 36% HCl. The high concentration HCl is diluted to 18% as it is loaded with water into emptied acid tanks. The spent acid is removed to an in-ground tank where it is held until a tank truck hauls it off-site. Acid is used for pickling until the iron content reaches between 8 and 10 percent. The percent HCl at this point is approximately 4 percent. The HCl fumes from the open acid tanks are drawn to two hoods at the sides of the tanks and controlled by a scrubber system. No known stack tests of emissions at the scrubber stack have occurred.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:
The facility tour was led by Mr. Darren DeLeon of Vision Pickling & Processing. The tour began where bundles of steel are broken apart to be placed on racks in preparation for pickling. The tour proceeded to the steel pickling area where water, alkaline solution, and acid tanks are located. Steam was observed rising from the heated alkaline cleaner tanks. Steel tube bundles ready for pickling, were viewed. EPA observed an apparatus for hanging tarps/enclosures around the ceiling above the pickling area, and black residue on the ceiling next to a large ceiling fan. The tour continued on to view the SRP coating area, the two 8,000-gallon rinse water tanks, a 2,500-gallon unsealed tank of excess coating oil, and freshwater tanks. The tour concluded at 1:10 PM.

Photos and/or Videos: were not taken during the inspection.

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

1. October 7, 2022 HCl Scrubber Inspection Report (Tri-Mer)
2. April 20, 2021 Air Quality Report; Indoor Science
3. Vision Pickling & Processing Pickling Procedure
4. SDS for Chemix 333-L
5. SDS for Hydrochloric Acid
6. SDS for 5LXS-IH
7. SDS for ATMOSCLEER 8001
8. SDS for Chemix 577-S Compound
9. SDS for Chemix 2100 Compound

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

DIGITAL SIGNATURES

Report Author: DANIEL SCHAUFELBERGER
Digitally signed by DANIEL SCHAUFELBERGER
Date: 2023.01.27 09:01:50 -06'00'

Section Supervisor: SARAH MARSHALL
Digitally signed by SARAH MARSHALL
Date: 2023.01.27 12:34:23 -06'00'